

referencing distinct portions thereof, and for embedding said indices in said information database;

transmission means, coupled to said one or more computer memory devices, for transmitting a stream of data packets containing said selected portions of said information database;

subscriber stations that each receive said transmitted stream of data packets, each subscriber station including filtering means for storing filter data, said filter data specifying a set of requested data packets which comprises a subset of said transmitted data packets, and for downloading into a memory storage device associated with said each subscriber station those of said received data packets which match said filter data stored by said each subscriber station;

said transmission means including means for transmitting in said stream of data packets special data packets indicating where in said stream of data packets local programming data packets may be inserted; and

one or more of said cable television systems including means for inserting into the stream of retransmitted data packets local programming data packets at positions in said stream of data packets indicated by said special data packets.

REMARKS

This amendment responds to the first office action. In the first office action the Examiner allowed claims 1, 5-12, 24, 28-35. Claims 2, 14, 25 and 37, and all claims dependent thereon, were rejected as being indefinite under 35 U.S.C. 112, second paragraph. Claims 13, 17-23, 36, and 40-46 were rejected under 35 U.S.C. 103 as being unpatentable over the teachings of Cichelli, and Young, or Cichelli, Young and Hoarty et al.

Claims 2-4, 14-16, 25-27, and 37-39 were noted as being allowable if rewritten to overcome the section 112 objections thereto.

Claims 1-66 are pending.

Claims 2, 14, 25 and 37 have been rewritten by replacing the "how long" clause with a "when" clause. The applicant respectfully requests withdrawal of the section 112 objection to these claims.

Allowed claims 1, 5, 6, 8, 11, 24, 31, and 34 have been amended to clarify various aspects of those claims.

Claim 13 has been amended to further define the "smart look ahead" feature of the present invention: The transmitted data contains embedded cross-referencing indices, which are similar to hyper-links between different sets of data. The filtering means automatically adds to its set of filter data the cross-referencing indices (or corresponding filter values) so that information cross referenced by data that the subscriber has requested is also automatically downloaded into the subscriber's computer, thereby anticipating likely future information requests by the subscriber. Thus, claim 13 is not directed to a hierarchy of indices, but rather is directed to a request anticipation scheme as part of an information distribution system. The advantage of the system of claim 13 is that it reduces the average amount of time that a subscriber must wait to receive requested information.

The applicant believes that none of the prior art of record either teaches or suggests an information distribution system with the smart look ahead mechanisms of claim 13.

Method claim 36 has been amended in a manner similar to claim 13, and thus the comments concerning claim 13 apply to claim 36 as well.

Claims 17, 18, 40 and 41 (and new claims 52, 53, 60, 61 and 66) concern an important feature of the present invention: a system and method for allowing "local programming" to be inserted into the transmitted data stream by cable television systems or the like. The information throughput of the claims information

transmission system/method is greatly increased by the local publishing/insertion of local programming: if N local systems insert 10% local programming, the information throughput of the system is increased by $0.10 \times N$ percent.

In claims 17, 40, 52, 60 and 66, special data packets are transmitted that notify the cable television system where to insert local programming, while in claims 18, 41, 53 and 61 the special data packets indicate that they are suitable for pre-emption by local programming. Thus the position in the data stream to insert local programming is flagged within the data stream itself. These claims are believed to differ from both the prior art of record and from the current operation of cable television systems and local television stations.

Independent claim 66 does not include the data packet scheduling limitations of the other claims, and thus is broader in scope. However, claim 66 includes the local programming insertion feature discussed above with reference to claims 17, 40, 52 and 60. The applicant believes that the prior art of record does not teach or suggest the combination represented by claim 66.

Claims 20, 43, 55, 63, 64 and 65 concern the use of a network server performing the data receiving and filter functions of the claimed invention for many subscribers. This reduces hardware costs, and also makes more efficient use of memory resources and the like since the amount of "extra" memory needed for receiving data is reduced in comparison to each subscriber needed to provide such extra memory. All these claims also include the smart look ahead feature discussed above with reference to claims 13 and 36.

Independent claims 64 and 65 do not include the data packet scheduling limitations of the other claims, and thus are broader in scope. However, claims 64 and 65 include the "smart look ahead" feature discussed above with reference to claims 13 and 36. The applicant believes that the prior art of record does not

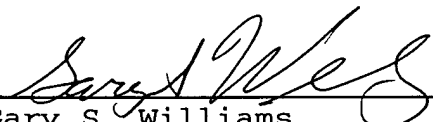
teach or suggest the combinations represented by claims 64 and 65.

Independent claims 51 and 56 are modified versions of claims 1 and 24 in which portions of the database are each assigned a transmission repetition rate, rather than the "tiers" of claims 1 and 24. Claims 51 and 56 also do not have the hierarchy language of claims 1 and 24. The applicant's review of the prior art of record indicates that the combination of scheduling and filtering functions of claims 51 and 56 is neither taught nor suggested by the prior art of record.

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney if a telephone call could help resolve any remaining items.

Respectfully submitted,

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